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JAPANESE PATENT OFFICE

PATENT ABSTRACTS OF JAPAN

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(71) Applicant: NIPPON DENSO CO LTD

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(72) Inventor: IWANAGA TAKASHI

(54) FUEL INJECTION DEVICE

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(57) Abstract:

PURPOSE: To gradually increase the volume of a control chamber and properly suppress the initial injection rate by integrally moving a control valve body via a projection as a valve body communicating or cutting off the control port and the discharge port of a three-way solenoid valve is opened.

CONSTITUTION: When a current is fed to a solenoid coil 49, an armature 39 is attracted by a core 47, an outer valve 36 serving as a valve body is raised, a poppet section 37 is released from the first valve seat 34, thus a control port Y and a discharge port Z are communicated, fuel is injected through a nozzle not shown in the figure. When the outer valve 36 is further raised, the second valve seat 43 is pressed to a poppet section 46, thus a feed port X and the control port Y are cut off. As the outer valve 36 is raised, a control valve body 9 is kept in contact with a projection 38 by the pressure difference between pressures applied to its front and back and the energizing force of a return spring and raised together with the outer valve 36. The volume of a control chamber 8 is gradually increased.

